Barakaevskaya

Summary in Liubin (1989, L'Anthropologie 1998), Liubin et al.(1994), Belyaeva (1999: 154-163).

A small karst cave in the Borisov gorge of the river Gubs canyon in the basin of the Kuban river. In the foothills of the Skalisty ridge, 40-50 km south-east of Maikop, in the Mostov region of the Krasnodar district. Absolute height 800-900 metres above sea level, relative height 73 metres. Entrance faces south. Length 9 m, maximum width 5-6 m, maximum height at the entrance 2.4 m. In the past the cave was 2-3 metres longer. Its entrance was covered by a rock overhang, which collapsed at the beginning of the Holocene. Discovered by P.U. Autlev in 1962, excavated by Liubin and Autlev in 1976-1977, 1979-1981. Other specialists took part in the work: G.F Baryshnikov, G.M. Levkovskaya, S.A. Nesmeyanov, and A.G. Chernyakhovskii. [NB Their reports are included in Liubin et al., 1994. The same is true of the anthropological report by A.A. Zubov, G.P. Romanova, and V.M. Kharitonov. We need this book]. Leaving the witness section out of account, the cave has been completely excavated (35 square metres). 5 transverse and longitudinal sections, maximum thickness 85 cm.

Stratigraphy

(1) loose humified loam, with a small amount of rubble and limestone blocks, and ashy lenses. 10-70 cm. Later prehistoric remains (Neolithic to Mediaeval).
(2) a dark brown phosphate-carbonate crust, formed by solution. In 5 places broken through by hearths which extend into the layer beneath. 0.1-0.5 cm.
(3) Yellowish-brown compact loam, filled (up to 70-80%) with sand, gravel, rubble, and a few larger pieces of limestone, plus numerous traces of human activity. 0.5-25 cm. Mousterian.
(4) Compact clay at the base, in pockets. 10-20 cm.

Liubin's observations on the stratigraphy (1989) were as follows.

(1) The layers are discordant, in that the Upper Palaeolithic is missing.
(2) There is a sharp contrast between Holocene layer 1 and Pleistocene layer 2.
(3) Mousterian layer 3 is in situ, sealed by layer 2.
(4) The crust constituting layer 2 is a lithological, biological, and cultural marker. It has an independent climatic significance, signifying a wet warm phase, succeeding a phase of active frost weathering in Mousterian layer 3.
(5) The Mousterian layer has a high proportion of anthropogenic elements. Although not thick, it contained >20,000 flints, about 80,000 bone fragments, many bone retouchers, traces of the use of fire, a large stone grinder which is assumed to have been used for pulverising haematite or limonite, and human remains (a child's mandible, 10 isolated teeth, and fragments of a skull?).

The Mousterian layer was excavated by means of 3 or 4 thin artificial horizons (5-8 cm thick). The separation by horizons allowed the tracing of certain changes in the archaeological inventory and the natural environment over time.

Sedimentology

Chernyakhovskii made a distinction between autochthonous and allochthonous elements in the sediments. The former are composed not only of fallen blocks but also of microcrystalline calcite, which formed as a result of the partial dissolution of these blocks, followed by their recrystallisation. Allochthonous components include organic material (fragments of bone, phosphate, and phytoliths) and also grains of silicate and aluminosilicate which do not exist in the local limestone. Unlike the Holocene level, the Mousterian layer contained principally autochthonous components. Phytoliths have been found only at the bottom of the layer. This is regarded as an additional proof of the existence of hearths in this horizon. The Mousterian layer also shows signs of post-depositional movement.

The strongest post-depositional effects are detected in the crust layer (2). Its degree of cementation increased from the base upwards. The crust incorporated certain materials derived from the Mousterian layer beneath (limestone rubble, flint chips, fragments of bone).

Fauna in the Mousterian layer.

Represented mainly by food debris. Many small fragments of large mammal bones; few remains of rodents, birds, and amphibians. According to Baryshnikov, the composition of the finds (mainly long bones and extremities) indicates that the meaty parts of the carcases alone were brought into the cave. 23 mammal [and rodent?] species, 3 species of birds, and a few bones of amphibians were identified.

Lepus europaeus, Ochotona sp., Marmota paleocaucasica Baryshn., Spermophilus cf. musicus Menet., Apodemus sylvaticus, Ellobius talpinus Pall., Cricetus cricetus L., Arvicola terrestris L., Microtus arvalis L., Chionomys nivalis Martins, Chionomys gud. Satun., Canis lupus sp., Vulpes vulpes sp., Martes foina Erxl., Crocuta spelaea Goldf., Equus ferus Boddaert, Sus scrofa L., Cervus elaphus L., Megaloceros giganteus Blum., Bison priscus Boj., Rupicapra rupicapra L., Capra caucasica Guld. et Pall., Ovis orientalis Gmel., Anas ex gr. querquedula L.-crecca L., Columba livia L., Corvus corax L. [See Table 1 in L'Anthropologie, where the finds are divided by layer, but birds are not included. Numbers are given in terms of NISP/MNI].

Only 670 bones out of >80,000 (<1%) allowed a specific determination. Bison constituted the bulk of the finds (48.8% of all exploitable animals, 290/11). Baryshnikov believes (despite the figures quoted) that the real number of individuals present cannot have been less than 200. Other important ungulates included Capra (28.2% or 168/9), Ovis (78/7), Megaloceros (25/5), and Equus (8/4).

The species composition (Ochotona, Spermophilus, Cricetus, Equus, Megalocerus, Bison, Ovis) indicates a steppe environment, in an area which is now covered by beech woods. Alpine forms (Marmota, Chionomys spp.) are confined to the base of the Mousterian layer (horizons 2-4). The number of bones of Capra , which lives high in the mountains, is much higher here than that of Ovis, which is characteristic of the xerophytic foothills. The appearance in the upper part of the

Mousterian layer (horizon 1) of the bones of Martes, Apodemus, Sus, and Cervus elaphus, together with the change in the relationship between Capra and Ovis, suggests the beginning of a process whereby the territory became more wooded.

Palynology

Determined by G.M. Levkovskaya. 10 samples, with few specimens. The numbering and determination of the phases given here follows the summary in Liubin (1989). The characterisation of the phases in Liubin (1998) is somewhat different, in that phase 1 is now said to correspond to archaeological horizon 4, phase 2 equals archaeological horizon 3, and phase 3 corresponds to the combined archaeological horizons 2 and 1 of the Mousterian layer. [NB Only access to the final report by Levkovskaya, contained in the monograph by Liubin et al. (1994) can clarify this matter fully].

(1) Mousterian layer, horizon 3, at the base. No deciduous AP. A few grains of Betulaceae, Betula alba, Betula fruticosa, Alnaster sp., Alnus sp., Juniperus sp., Ranunculaceae, Asteraceae, Artemisia sp. Since Alnaster does not now exist in the Caucasus (in Europe it signifies an area with perpetual frost) and Betula spp. grow on the boundary of the wooded and sub-Alpine zones, there is an indication that this was a cold climate. Levkovskaya's second report is quoted as saying that the mean annual temperature by comparison with the present may have fallen by 3.5°C.
(2) Mousterian layer, horizon 2, mid part. More pollen grains. Predominance of Betula alba, Alnus, Corylus sp. A few grains of Acer sp., Juniperus, Ostrya sp. NAP: Cyperaceae, Valerianaceae, Brassicaceae. Also Polipodiaceae, Equisetum, Bryales. The cave region probably corresponded to the upper part of the wooded zone.
(3) Mousterian layer, horizon 1, upper part. A few grains of Picea, alder, Ostrya sp., Alnaster sp. Also Poaceae, Cyperaceae, Asteraceae, Polipodiaceae, Botrychium. In view of the scarcity of the finds, no clear conclusion regarding the environment was considered possible in the first report.
(4) Layer 2, the phosphate-carbonate crust. AP: 32% deciduous species including Ulmus sp., Tilia sp., Carpinus orientalis, Juglans regia, alder, hazel. A few birch. NAP: dominant Asteraceae, Polipodiaceae, also Chenopodiaceae, Cyperaceae, and indeterminate. Reminiscent of the present day deciduous wooded zone, but not completely analogous. Levkovskaya (as quoted in Belyaeva 1999) suggests that the layer corresponds to a warm interstadial within the last glaciation, comparable to some extent with two warm phases established at Monasheskaya, in layer 3A horizon 3 and the base of layer 4.
(5) Holocene layer 1, samples 3-6. No grains in sample 3, a few in the rest. Pine, alder, hazel, birch, beech, Alnaster, Iridaceae, Ericaceae, Cichoriaceae, Urtica, Botrychium, Polipodiaceae, Sphagnum sp. The palaeogeographic situation was not stable. Further data are needed.

Archaeology

A workshop plus a habitation site. Raw material, 98-99% local grey/black flint of poor quality, a small amount of better yellow/brown flint that was brought into the cave from outside the canyon. Only 60 cores, but all stages of secondary working

are represented. 150 bone and stone retouchers, a large number of small flakes. Basically disc cores. Small sized industry, average 5-6 cm max length. Dechets de travail 89.9%, tools 4.8%, utilised flakes 5.3%. Basic categories of tools (n=795: a full list is given in Table 4 of Liubin 1998): points 29, sidescrapers 277, notches 223, denticulates 52. In general, a Typical Micromousterian, with high IR=34.8 and index of notches=30.65. Decline in relative abundance of notches from base upwards, but the industry throughout is broadly homogeneous. A few bifacially worked pieces. Presumably this has inspired a comparison also to the East European Micoquian. Similarities to Monasheskaya support the idea that there was a 'local cultural tradition'. One of the characteristics of this tradition is the use of ventral thinning as applied to certain tools. The Mousterian of the Transcaucasus is different.

Anthropological finds

Determinations by A.A. Zubov, G.P. Romanova, V.M. Kharitonov. In 1979 at the base of the Mousterian layer, 2-3 cm from the cave floor, in horizon 2, was found a child's mandible. The child was 2-3 years old, with characteristics that can be described as belonging to a type 'intermediate' between Neanderthal and anatomically modern man.

Palaeogeography and chronology

The first settlement of the cave took place in a dry and cold climate, to judge by the characteristics of the base of the Mousterian layer, i.e., presence of exfoliated rubble, predominance of open steppe animals, and pollen indicative of sub-Alpine vegetation. The vegetation zones of the northern slopes of the Western Caucasus at that time were 1000 metres lower than at present. The joint presence of Alpine species (Marmota, Chionomys, Capra) and those characteristic of the steppes in front of the Caucasus (Equus, Ellobius, Cricetus) allows us to reconstruct the evolution of the landscape. The wooded zone was degraded and divided into separate islands, and the Alpine meadows were directly joined to the steppes, which penetrated deep into the mountains.

In the upper part of the Mousterian layer there are indications of an improved climate. In horizons 1 and 2 there are a few remains of such wooded mountain species as Martes and Cervus elaphus, and in horizon 1 Sus scrofa and Apodemus. At the time of the formation of horizon 2, judging by the pollen, the cave corresponded to the upper part of the wooded zone. These are indications of the onset of a warm climatic episode, perhaps Brorup, which in Liubin's opinion is shown by lithology (a phosphate crust) and by pollen (deciduous trees in the sample corresponding to that layer). The relatively archaic nature of the Mousterian industry is not in contradiction with this.

The accumulation of the Mousterian layer, which is not very thick, proceeded very slowly, judging by the appreciable evolution of the stone industry which occurred and the biostratigraphic changes which took place over that time.

paj
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